

Untitled.ST25  
SEQUENCE LISTING

<110> University of Manitoba  
Her Majesty the Queen in Right of Canada as Represented by  
the Minister of Health

<120> SARS-RELATED PROTEINS

<130> 85084-1003

<150> US 60/462688

<151> 2003-04-15

<150> US 60/472416

<151> 2003-05-22

<160> 2

<170> PatentIn version 3.2

<210> 1

<211> 421

<212> PRT

<213> coronavirus

<400> 1

Ser Asp Asn Gly Pro Gln Ser Asn Gln Arg Ser Ala Pro Arg Ile Thr  
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Phe Gly Gly Pro Thr Asp Ser Thr Asp Asn Asn Gln Asp Gly Gly Arg  
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Asn Gly Ala Arg Pro Lys Gln Arg Arg Pro Gln Gly Leu Pro Asn Asn  
35 40 45

Thr Ala Ser Trp Phe Thr Ala Leu Thr Gln His Gly Lys Glu Glu Leu  
50 55 60

Arg Phe Pro Arg Gly Gln Gly Val Pro Ile Asn Thr Asn Ser Gly Pro  
65 70 75 80

Asp Asp Gln Ile Gly Tyr Tyr Arg Arg Ala Thr Arg Arg Val Arg Gly  
85 90 95

Gly Asp Gly Lys Met Lys Glu Leu Ser Pro Arg Trp Tyr Phe Tyr Tyr  
100 105 110

Leu Gly Thr Gly Pro Glu Ala Ser Leu Pro Tyr Gly Ala Asn Lys Glu  
115 120 125

Gly Ile Val Trp Val Ala Thr Glu Gly Ala Leu Asn Thr Pro Lys Asp  
130 135 140

## Untitled.ST25

His Ile Gly Thr Arg Asn Pro Asn Asn Asn Ala Ala Thr Val Leu Gln  
 145 150 155 160  
 Leu Pro Gln Gly Thr Thr Leu Pro Lys Gly Phe Tyr Ala Glu Gly Ser  
 165 170 175  
 Arg Gly Gly Ser Gln Ala Ser Ser Arg Ser Ser Ser Arg Ser Arg Gly  
 180 185 190  
 Asn Ser Arg Asn Ser Thr Pro Gly Ser Ser Arg Gly Asn Ser Pro Ala  
 195 200 205  
 Arg Met Ala Ser Gly Gly Gly Glu Thr Ala Leu Ala Leu Leu Leu Leu  
 210 215 220  
 Asp Arg Leu Asn Gln Leu Glu Ser Lys Val Ser Gly Lys Gly Gln Gln  
 225 230 235 240  
 Gln Gln Gly Gln Thr Val Thr Lys Lys Ser Ala Ala Glu Ala Ser Lys  
 245 250 255  
 Lys Pro Arg Gln Lys Arg Thr Ala Thr Lys Gln Tyr Asn Val Thr Gln  
 260 265 270  
 Ala Phe Gly Arg Arg Gly Pro Glu Gln Thr Gln Gly Asn Phe Gly Asp  
 275 280 285  
 Gln Asp Leu Ile Arg Gln Gly Thr Asp Tyr Lys His Trp Pro Gln Ile  
 290 295 300  
 Ala Gln Phe Ala Pro Ser Ala Ser Ala Phe Phe Gly Met Ser Arg Ile  
 305 310 315 320  
 Gly Met Glu Val Thr Pro Ser Gly Thr Trp Leu Thr Tyr His Gly Ala  
 325 330 335  
 Ile Lys Leu Asp Asp Lys Asp Pro Gln Phe Lys Asp Asn Val Ile Leu  
 340 345 350  
 Leu Asn Lys His Ile Asp Ala Tyr Lys Thr Phe Pro Pro Thr Glu Pro  
 355 360 365  
 Lys Lys Asp Lys Lys Lys Lys Thr Asp Glu Ala Gln Pro Leu Pro Gln  
 370 375 380  
 Arg Gln Lys Lys Gln Pro Thr Val Thr Leu Leu Pro Ala Ala Asp Met  
 385 390 395 400

## Untitled.ST25

Asp Asp Phe Ser Arg Gln Leu Gln Asn Ser Met Ser Gly Ala Ser Ala  
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Asp Ser Thr Gln Ala  
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<210> 2

<211> 1254

<212> PRT

<213> coronavirus

<300>

<301> Krokhin et al.

<302> Mass Spectrometric Characterization of Proteins from the SARS  
 virus: A Preliminary Report

<303> Mol. Cell. Proteomics

<304> 2

<305> 5

<306> 346-356

<307> 2003-05-29

<400> 2

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Thr Ser Ser Met Arg Gly Val Tyr Tyr Pro Asp Glu Ile Phe Arg Ser  
 35 40 45

Asp Thr Leu Tyr Leu Thr Gln Asp Leu Phe Leu Pro Phe Tyr Ser Asn  
 50 55 60

Val Thr Gly Phe His Thr Ile Asn His Thr Phe Gly Asn Pro Val Ile  
 65 70 75 80

Pro Phe Lys Asp Gly Ile Tyr Phe Ala Ala Thr Glu Lys Ser Asn Val  
 85 90 95

Val Arg Gly Trp Val Phe Gly Ser Thr Met Asn Asn Lys Ser Gln Ser  
 100 105 110

Val Ile Ile Ile Asn Asn Ser Thr Asn Val Val Ile Arg Ala Cys Asn  
 115 120 125

Phe Glu Leu Cys Asp Asn Pro Phe Phe Ala Val Ser Lys Pro Met Gly  
 130 135 140

Thr Gln Thr His Thr Met Ile Phe Asp Asn Ala Phe Asn Cys Thr Phe

## Untitled.ST25

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 Glu Tyr Ile Ser Asp Ala Phe Ser Leu Asp Val Ser Glu Lys Ser Gly  
                                  165                                   170                                   175  
 Asn Phe Lys His Leu Arg Glu Phe Val Phe Lys Asn Lys Asp Gly Phe  
                                  180                                   185                                   190  
 Leu Tyr Val Tyr Lys Gly Tyr Gln Pro Ile Asp Val Val Arg Asp Leu  
                                  195                                   200                                   205  
 Pro Ser Gly Phe Asn Thr Leu Lys Pro Ile Phe Lys Leu Pro Leu Gly  
                                  210                                   215                                   220  
 Ile Asn Ile Thr Asn Phe Arg Ala Ile Leu Thr Ala Phe Ser Pro Ala  
                                  225                                   230                                   235                                   240  
 Gln Asp Ile Trp Gly Thr Ser Ala Ala Ala Tyr Phe Val Gly Tyr Leu  
                                  245                                   250                                   255  
 Lys Pro Thr Thr Phe Met Leu Lys Tyr Asp Glu Asn Gly Thr Ile Thr  
                                  260                                   265                                   270  
 Asp Ala Val Asp Cys Ser Gln Asn Pro Leu Ala Glu Leu Lys Cys Ser  
                                  275                                   280                                   285  
 Val Lys Ser Phe Glu Ile Asp Lys Gly Ile Tyr Gln Thr Ser Asn Phe  
                                  290                                   295                                   300  
 Arg Val Val Pro Ser Gly Asp Val Val Arg Phe Pro Asn Ile Thr Asn  
                                  305                                   310                                   315                                   320  
 Leu Cys Pro Phe Gly Glu Val Phe Asn Ala Thr Lys Phe Pro Ser Val  
                                  325                                   330                                   335  
 Tyr Ala Trp Glu Arg Lys Lys Ile Ser Asn Cys Val Ala Asp Tyr Ser  
                                  340                                   345                                   350  
 Val Leu Tyr Asn Ser Thr Phe Phe Ser Thr Phe Lys Cys Tyr Gly Val  
                                  355                                   360                                   365  
 Ser Ala Thr Lys Leu Asn Asp Leu Cys Phe Ser Asn Val Tyr Ala Asp  
                                  370                                   375                                   380  
 Ser Phe Val Val Lys Gly Asp Asp Val Arg Gln Ile Ala Pro Gly Gln  
                                  385                                   390                                   395                                   400

## Untitled.ST25

Thr Gly Val Ile Ala Asp Tyr Asn Tyr Lys Leu Pro Asp Asp Phe Met  
 405 410 415  
 Gly Cys Val Leu Ala Trp Asn Thr Arg Asn Ile Asp Ala Thr Ser Thr  
 420 425 430  
 Gly Asn Tyr Asn Tyr Lys Tyr Arg Tyr Leu Arg His Gly Lys Leu Arg  
 435 440 445  
 Pro Phe Glu Arg Asp Ile Ser Asn Val Pro Phe Ser Pro Asp Gly Lys  
 450 455 460  
 Pro Cys Thr Pro Pro Ala Leu Asn Cys Tyr Trp Pro Leu Asn Asp Tyr  
 465 470 475 480  
 Gly Phe Tyr Thr Thr Thr Gly Ile Gly Tyr Gln Pro Tyr Arg Val Val  
 485 490 495  
 Val Leu Ser Phe Glu Leu Leu Asn Ala Pro Ala Thr Val Cys Gly Pro  
 500 505 510  
 Lys Leu Ser Thr Asp Leu Ile Lys Asn Gln Cys Val Asn Phe Asn Phe  
 515 520 525  
 Asn Gly Leu Thr Gly Thr Gly Val Leu Thr Pro Ser Ser Lys Arg Phe  
 530 535 540  
 Gln Pro Phe Gln Gln Phe Gly Arg Asp Val Ser Asp Phe Thr Asp Ser  
 545 550 555 560  
 Val Arg Asp Pro Lys Thr Ser Glu Ile Leu Asp Ile Ser Pro Cys Ala  
 565 570 575  
 Phe Gly Gly Val Ser Val Ile Thr Pro Gly Thr Asn Ala Ser Ser Glu  
 580 585 590  
 Val Ala Val Leu Tyr Gln Asp Val Asn Cys Thr Asp Val Ser Thr Ala  
 595 600 605  
 Ile His Ala Asp Gln Leu Thr Pro Ala Trp Arg Ile Tyr Ser Thr Gly  
 610 615 620  
 Asn Asn Val Phe Gln Thr Gln Ala Gly Cys Leu Ile Gly Ala Glu His  
 625 630 635 640  
 Val Asp Thr Ser Tyr Glu Cys Asp Ile Pro Ile Gly Ala Gly Ile Cys  
 645 650 655

## Untitled.ST25

Ala Ser Tyr His Thr Val Ser Leu Leu Arg Ser Thr Ser Gln Lys Ser  
 660 665 670  
 Ile Val Ala Tyr Thr Met Ser Leu Gly Ala Asp Ser Ser Ile Ala Tyr  
 675 680 685  
 Ser Asn Asn Thr Ile Ala Ile Pro Thr Asn Phe Ser Ile Ser Ile Thr  
 690 695 700  
 Thr Glu Val Met Pro Val Ser Met Ala Lys Thr Ser Val Asp Cys Asn  
 705 710 715 720  
 Met Tyr Ile Cys Gly Asp Ser Thr Glu Cys Ala Asn Leu Leu Leu Gln  
 725 730 735  
 Tyr Gly Ser Phe Cys Thr Gln Leu Asn Arg Ala Leu Ser Gly Ile Ala  
 740 745 750  
 Ala Glu Gln Asp Arg Asn Thr Arg Glu Val Phe Ala Gln Val Lys Gln  
 755 760 765  
 Met Tyr Lys Thr Pro Thr Leu Lys Tyr Phe Gly Gly Phe Asn Phe Ser  
 770 775 780  
 Gln Ile Leu Pro Asp Pro Leu Lys Pro Thr Lys Arg Ser Phe Ile Glu  
 785 790 795 800  
 Asp Leu Leu Phe Asn Lys Val Thr Leu Ala Asp Ala Gly Phe Met Lys  
 805 810 815  
 Gln Tyr Gly Glu Cys Leu Gly Asp Ile Asn Ala Arg Asp Leu Ile Cys  
 820 825 830  
 Ala Gln Lys Phe Asn Gly Leu Thr Val Leu Pro Pro Leu Leu Thr Asp  
 835 840 845  
 Asp Met Ile Ala Ala Tyr Thr Ala Ala Leu Val Ser Gly Thr Ala Thr  
 850 855 860  
 Ala Gly Trp Thr Phe Gly Ala Gly Ala Ala Leu Gln Ile Pro Phe Ala  
 865 870 875 880  
 Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val  
 885 890 895  
 Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile  
 900 905 910

## Untitled.ST25

Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys  
 915 920 925

Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val  
 930 935 940

Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp  
 945 950 955 960

Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp Arg  
 965 970 975

Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln Gln  
 980 985 990

Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn Leu Ala Ala Thr  
 995 1000 1005

Lys Met Ser Glu Cys Val Leu Gly Gln Ser Lys Arg Val Asp Phe  
 1010 1015 1020

Cys Gly Lys Gly Tyr His Leu Met Ser Phe Pro Gln Ala Ala Pro  
 1025 1030 1035

His Gly Val Val Phe Leu His Val Thr Tyr Val Pro Ser Gln Glu  
 1040 1045 1050

Arg Asn Phe Thr Thr Ala Pro Ala Ile Cys His Glu Gly Lys Ala  
 1055 1060 1065

Tyr Phe Pro Arg Glu Gly Val Phe Val Phe Asn Gly Thr Ser Trp  
 1070 1075 1080

Phe Ile Thr Gln Arg Asn Phe Phe Ser Pro Gln Ile Ile Thr Thr  
 1085 1090 1095

Asp Asn Thr Phe Val Ser Gly Asn Cys Asp Val Val Ile Gly Ile  
 1100 1105 1110

Ile Asn Asn Thr Val Tyr Asp Pro Leu Gln Pro Glu Leu Asp Ser  
 1115 1120 1125

Phe Lys Glu Glu Leu Asp Lys Tyr Phe Lys Asn His Thr Ser Pro  
 1130 1135 1140

Asp Val Asp Leu Gly Asp Ile Ser Gly Ile Asn Ala Ser Val Val

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1155

1145

1150

Asn Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys Asn  
1160 1165 1170

Leu Asn Glu Ser Leu Ile Asp Leu Gln Glu Leu Gly Lys Tyr Glu  
1175 1180 1185

Gln Tyr Ile Lys Trp Pro Trp Tyr Val Trp Leu Gly Phe Ile Ala  
1190 1195 1200

Gly Leu Ile Ala Ile Val Met Val Thr Ile Leu Leu Cys Cys Met  
1205 1210 1215

Thr Ser Cys Cys Ser Cys Leu Lys Gly Ala Cys Ser Cys Gly Ser  
1220 1225 1230

Cys Cys Lys Phe Asp Glu Asp Asp Ser Glu Pro Val Leu Lys Gly  
1235 1240 1245

Val Lys Leu His Tyr Thr  
1250